LETTER REPORT
FOR
EGAN-MARINE SITE
LEMONT, COOK COUNTY, ILLINOIS
TDD No.: T05-9501-003
PAN: EIL0852CBA

MARCH 22, 1995

Prepared for:
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Emergency and Enforcement Response Branch
77 West Jackson Boulevard
Chicago, Illinois 60604

Prepared by: Karen Rydzewski Date: 3/22/95
Karen Rydzewski, TAT Project Manager

Reviewed by: Mary J. Ripp Date: 3/22/95
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Approved by: Date: 3/22/95
Thomas Kouris, TAT Leader

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International Specialists in the Environment

Personnel	Affiliation
Barbara Carr	U.S. EPA - SPCC Coordinator
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James Haennicke	IEPA - Land Division
Robert Sulski	IEPA - Water Division
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James N. Chodora	MWRDGC - Pollution Control Officer 2
Frank Kody	MWRDGC - Pollution Control Officer 2
Glenn Rohloff	MWRDGC - Associate Civil Engineer
James Figlewicz	MWRDGC - Water Sampler
Larry Conroy	MWRDGC - Water Sampler
Irwin Polls	MWRDGC - Research and Development
Dennis Egan	E-M - President

The inspectors arrived at the E-M facility at 1120 hours. The inspection commenced with an interview with Dennis Egan. Dennis Egan was questioned regarding his facility's operations. E-M sells edible oil for animal feed, cleans barges, and provides emergency response services. E-M receives off-specification or expired oil from Van den Berg Foods, E-M's main oil supplier, and other facilities. The oil is then melted down and the pH is adjusted. This is the only processing that Dennis Egan indicated is performed on site. E-M then loads barges and trucks with this oil and sells it to be mixed into animal feed. E-M does not have a National Pollutant Discharge Elimination System (NPDES) permit for discharging to the Canal, nor does the facility have any discharge permit of any kind. The water being discharged to the Canal is rainwater and steam runoff. Dennis Egan stated that he was unaware of state or federal discharge permit regulations. In answer to IEPA questions regarding on-site incineration or burning, Dennis Egan stated the maintenance shops are heated by burning wood dunnage from barges that are serviced or used for shipping. Dennis Egan also stated that the shop uses "anything that burns" for fuel for the wood burner.

Regarding E-M emergency response service operations, Dennis Egan stated that his company has designed a special pump which can move heavy oils and viscous materials. E-M emergency response operations specialize in utilizing this pump. Response operations recover spilled product and return it to the company which had the spill for processing. As a general rule, Dennis Egan stated that E-M does not bring any wastes back to its facility from an emergency response job.

In addition, Dennis Egan was questioned about his submittal of an SPCC Plan for his facility.

Dennis Egan stated that he hired a consulting firm, Environmental Management and Resource Consultants, Inc. (EMRC), to prepare an SPCC Plan. When questioned by Barbara Carr about E-M's lack of a response to the LOD, Dennis Egan stated that he was corresponding with U.S. EPA On-Scene Coordinator (OSC) Len Zintak, who was present at the initial site visit and inspection. Dennis Egan also stated that he disposed of the drums which were in question during the last inspection by landfilling them and he indicated that he communicated all information regarding these drums verbally to OSC Zintak. During the interview, Dennis Egan phoned EMRC to inquire about the extension for the LOD, which had been discussed previously between consultant and client; Jeanette Virgilio spoke on the speakerphone. Ms. Virgilio stated that her firm has had no correspondence with U.S. EPA regarding E-M, and that a request for an extension of time was to be written and sent, but this had not been done by the consulting firm.

After the interview was completed, Dennis Egan proceeded with a site tour. See Attachment A for site photographs taken during the site tour. A number of changes had occurred since the initial site visit on October 20, 1994; however, due to the snow-covered ground, the majority of site soils were not visible (Figure 1). On the western peninsula, E-M had moved the small diesel tanks to the north side of the parts building and placed the tanks in a concrete secondary containment. It was noted that the containment walls were situated in such proximity to the tanks that a rupture or large leak occurring at the north end of the tank would not be confined to the containment. The oil/water separator next to the shallow pit was not in operation. Dennis Egan stated that its pipes had frozen and burst. All water from the shallow pit area was now collected in a sump next to the oil/water separator and then pumped out to the Canal. The "half tank", a single tank which was cut in half and laid on its horizontal axis, which was used for melting oil was moved from the area next to the glass-lined tanks to an area adjacent to the discarded underground storage tank (UST). A sludge trough was added to the area which the aforementioned half tank had occupied. One of the 25,000-gallon horizontal vegetable oil tanks was removed from the area next to the vegetable oil tank battery. Polymer tanks were removed from the bermed area and placed north and west of the metal scrap pile. On the eastern peninsula, a semi-trailer for steam cleaning barges and a mobile home were new to the eastern border of the barge slip. A tank truck and truck trailer were removed from site. The open drums of oil near the 8,000-gallon aboveground storage tank (AST) and next to the pole shed were removed. Several ASTs near the southern portion of the peninsula had been removed. In addition to these changes, several key observations were made by TAT during the site tour. On the western peninsula several half full drums of oil which had no lids were staged outside the diesel fuel tanks containment area. The concrete secondary containment in which the diesel tanks had been placed was inadequate because the larger diesel tank extended past the containment wall. One of the

glass-lined tanks was losing a liquid in a fast flowing stream from a crack in the tank near a steam exhaust pipe. A wooden wedge was placed in the crack; however, the liquid continued to stream out of the tank. Standing oil/water was observed in the shallow pit area. Also in this area, east of the glass-lined tanks, two E-M employees were scraping oil spilled from a loading operation and placing the oil into the sludge trough. Standing puddles of oil and oil-saturated ground were present between the diesel/asphalt tanks. All tanks at the facility were in fair to poor condition and all lacked adequate secondary containment.

Following the site tour by Dennis Egan, sampling points were determined by the SPCC Coordinator in consultation with TAT. A total of four grab samples were collected. Dennis Egan declined to split samples. All four samples were collected following standard operating procedures. All samples were collected by TAT member Rydzewski. Sample S1 was collected at 1345 hours from between the vertical 27,000-gallon vegetable oil tanks. Sample S1 was collected at a depth of 6 to 8 inches below ground level and consisted of a black, gravel-like solid. Sample S2 was collected at 1400 hours from the same location as S1 except at a depth of 12 to 14 inches, which is where bedrock was encountered. Sample S2 consists of a black and grey fine gravel. Samples S3 and S4 were also collocated. These samples were collected between asphalt tanks T3 and T4. S3 was collected at 1420 hours from the ground surface and consisted of a mixture of black oil and liquid. Sample S4 was collected at 1430 hours from approximately 4 to 5 inches below ground level and consisted of a black and grey solid material.

The outside of the sample jars were decontaminated with distilled water and packaged for pick-up by the laboratory, National Environmental Testing Midwest, Inc., Bartlett, Illinois, on January 11, 1995. All four samples were analyzed for TPH at an Office of Solid Waste and Emergency Response Directive Quality Assurance Level II with a seven calendar day turnaround time.

Sample analysis detected levels of TPH as diesel fuel in all four samples. Sample S1 contained 1,180 milligrams per kilogram (mg/kg) TPH as diesel fuel, sample S2 contained 2,130 mg/kg, sample S3 contained 157,000 mg/kg, and sample S4 contained 4,390 mg/kg. All samples also contained less than 20 mg/kg of TPH as gasoline and oil. The data and quality assurance review can be found as Attachment B.

Based on the site interview and observations, the E-M facility has not come into compliance with the SPCC regulations. The facility lacks proper secondary containment for all forms of oil storage at the facility which includes drums, tanks, and portable tanks. A number of large capacity tanks, i.e., 60,000-gallons, are within 50 to 75 feet of the Canal and an 8,000-gallon tank is located adjacent to the Canal. Because of the lack of proper secondary containment and the close proximity

to the water, even a small spill of less than 10 gallons could discharge into a navigable water. In addition, the poor housekeeping of the facility and careless loading and unloading operations facilitates oil reaching the Canal through overland stormwater runoff. A history of poor housekeeping and improper spill cleanup was evident by the sample analysis which detected TPH as diesel fuel at varying layers to a depth from the surface down to the bedrock. Adequate secondary containment and proper spill prevention measures need to be addressed at the E-M facility to ensure protection of the navigable waters of the United States. A cost estimate for a concrete and a compacted clay secondary containment area for the largest tank battery on the western peninsula are included as Attachment C.

The preparation of this report and the included attachments complete the tasks assigned to the TAT under this TDD. Please contact this office should any additional information on this site be required.

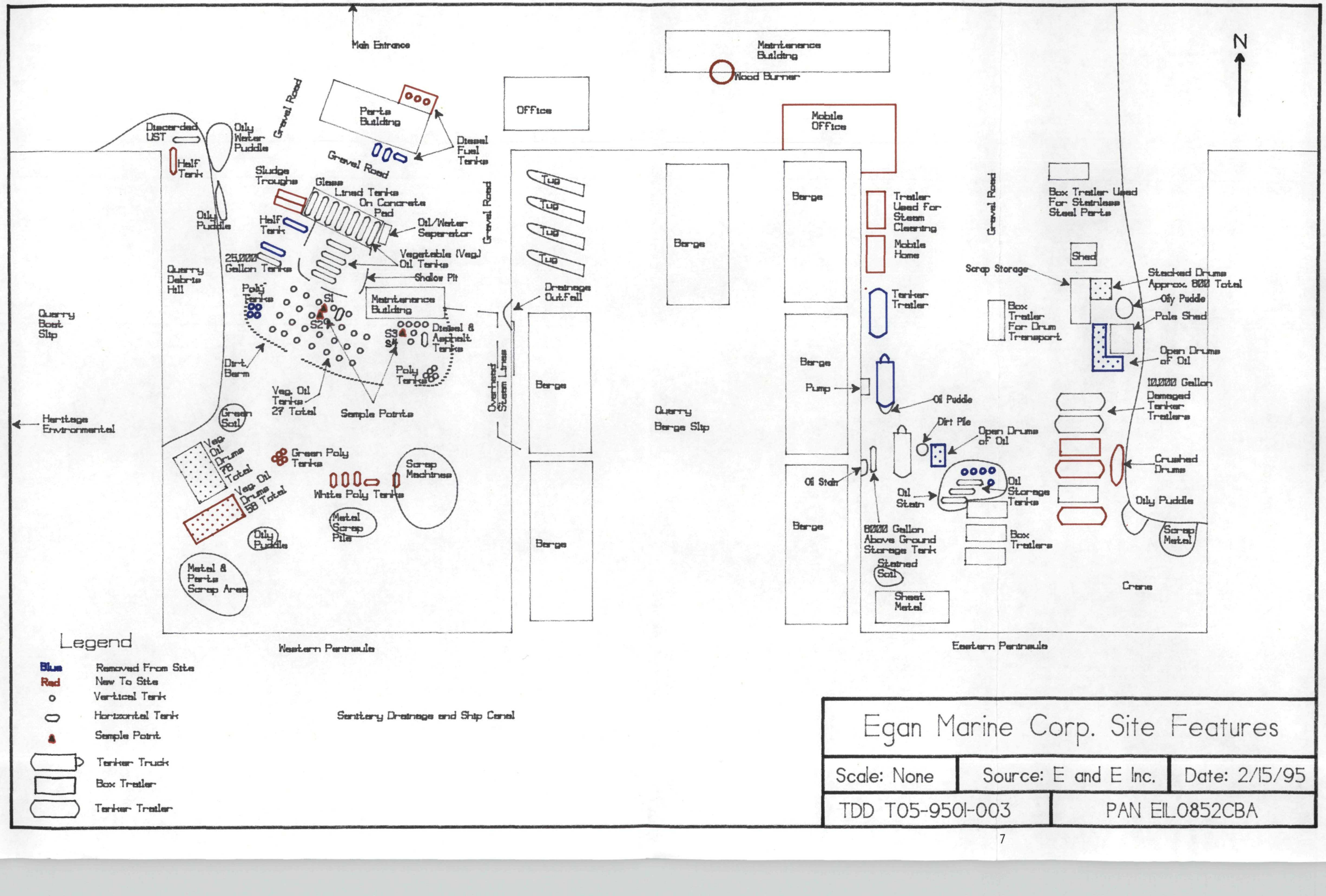
Sincerely,

Karen Rydzewski
TAT Member

Thomas Kouris
TAT Leader

Attachments: A - Site Photodocumentation
B - Analytical Data Package
C - Secondary Containment Cost Estimate

cc: Barbara Carr, SPCC Coordinator



Egan Marine Corp. Site Features

Scale: None	Source: E and E Inc.	Date: 2/15/95
TDD T05-9501-003	PAN EIL0852CBA	

Attachment A

Site Photographs

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 1 DIR: SE PHOTOGRAPHER: Rydzewski
DESCR: Diesel fuel tanks which have been moved and enclosed in a dike since 10/30/94.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 2 DIR: NW PHOTOGRAPHER: Rydzewski
DESCR: Drums outside diesel tank berm, filled with residual oil from a vacuum truck bought by Egan Marine.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 3 DIR: W PHOTOGRAPHER: Rydzewski
DESCR: Residual oil in open-top drums near diesel tanks. Residual oil is from a vacuum truck.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 4 DIR: WSW PHOTOGRAPHER: Rydzewski
DESCR: Pump used for draining shallow pit area. Pump is located next to maintance building.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 5 DIR: N PHOTOGRAPHER: Rydzewski
DESCR: Deteriorated condition of 25,000 gallon vegetable oil tank which is next to oil/water separator.

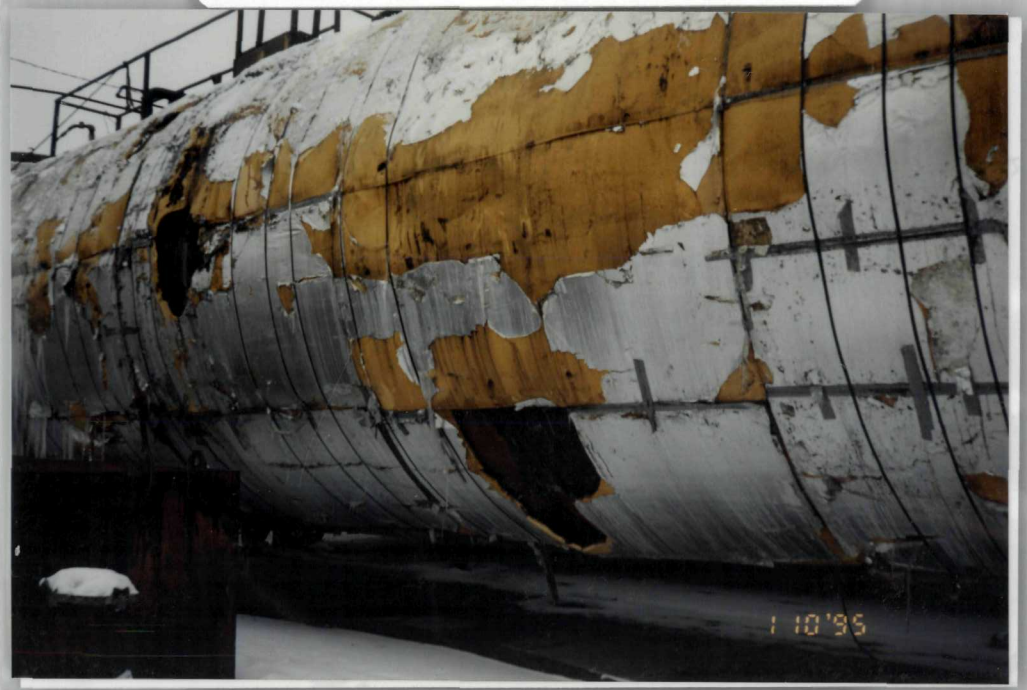
SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 6 DIR: SW PHOTOGRAPHER: Rydzewski
DESCR: All oil from the shallow pit drains to this sump. Water/oil is then pumped out to canal.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 7 DIR: SW PHOTOGRAPHER: Rydzewski
DESCR: Water and oil in shallow pit area and 25,000 gallon vegetable oil tanks in background.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 8 DIR: S PHOTOGRAPHER: Rydzewski
DESCR: Empty oil/water separator. Separator has been drained because of freezing problems.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 9 DIR: SE PHOTOGRAPHER: Rydzewski
DESCR: View showing lack of secondary containment & distance from 25,000 gallon oil tanks to canal.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 10 DIR: W PHOTOGRAPHER: Rydzewski
DESCR: Deteriorated condition of tank next to separator and subject of photograph #9.

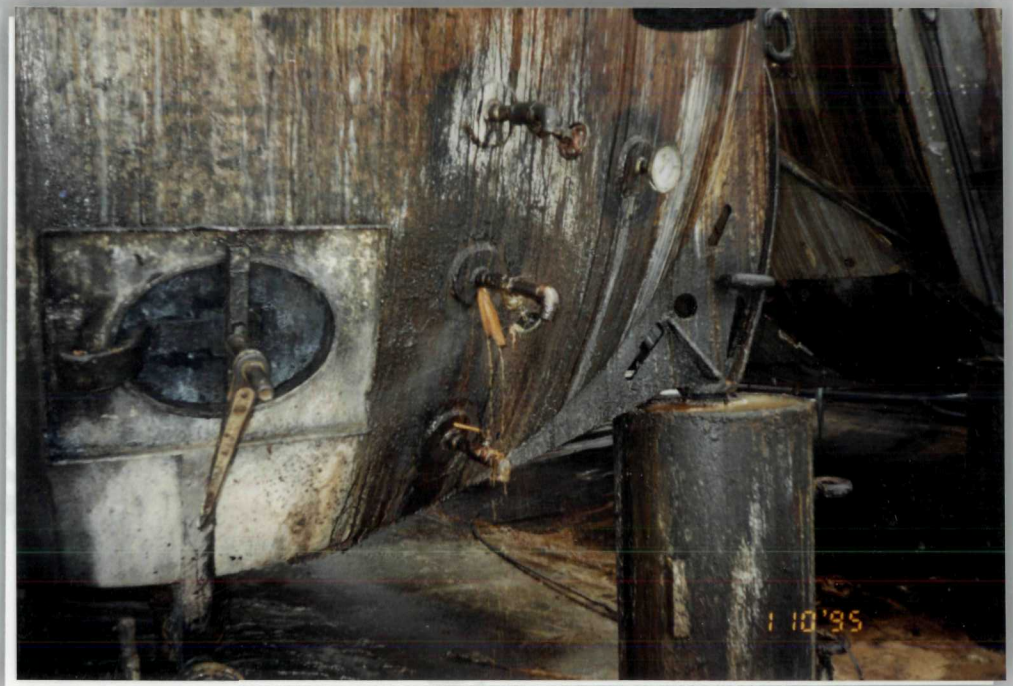


SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 11 DIR: SW PHOTOGRAPHER: Rydzewski
DESCR: Deteriorated condition of vegetable oil tanks on site.

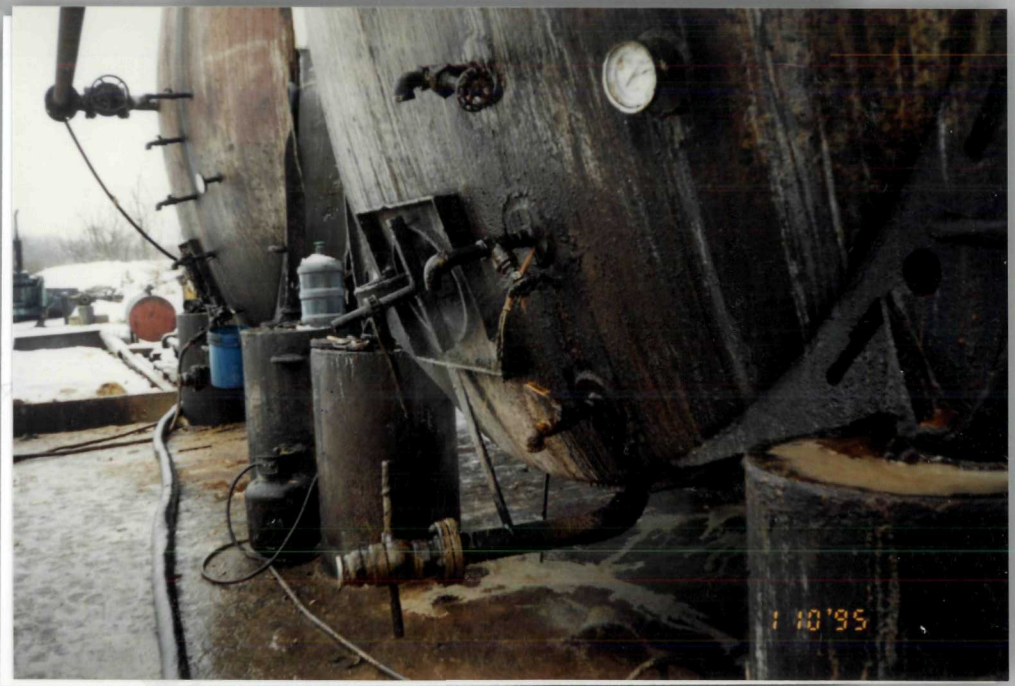
SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 12 DIR: W PHOTOGRAPHER: Rydzewski
DESCR: Full drip bucket to catch oil drips when loading/unloading 25,000 gallon vegetable oil tanks.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 13 DIR: SW PHOTOGRAPHER: Rydzewski
DESCR: Egan Marine employees scraping and removing spilled vegetable oil after an unloading event.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 14 DIR: W PHOTOGRAPHER: Rydzewski
DESCR: Tank truck with oil spilled from its top access hatch after loading or unloading operation.



SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 15 DIR: NE PHOTOGRAPHER: Rydzewski
DESCR: Wooden wedge used as a plug to stop leak from 25,000 gallon glass-lined oil tank.



SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 16 DIR: NW PHOTOGRAPHER: Rydzewski
DESCR: Wooden wedge used to try to plug leak from 25,000 gallon glass-lined oil tank.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 17 DIR: NW PHOTOGRAPHER: Rydzewski
DESCR: Close-up view of wooden wedge used to try to plug leak of 25,000 gallon oil tank.

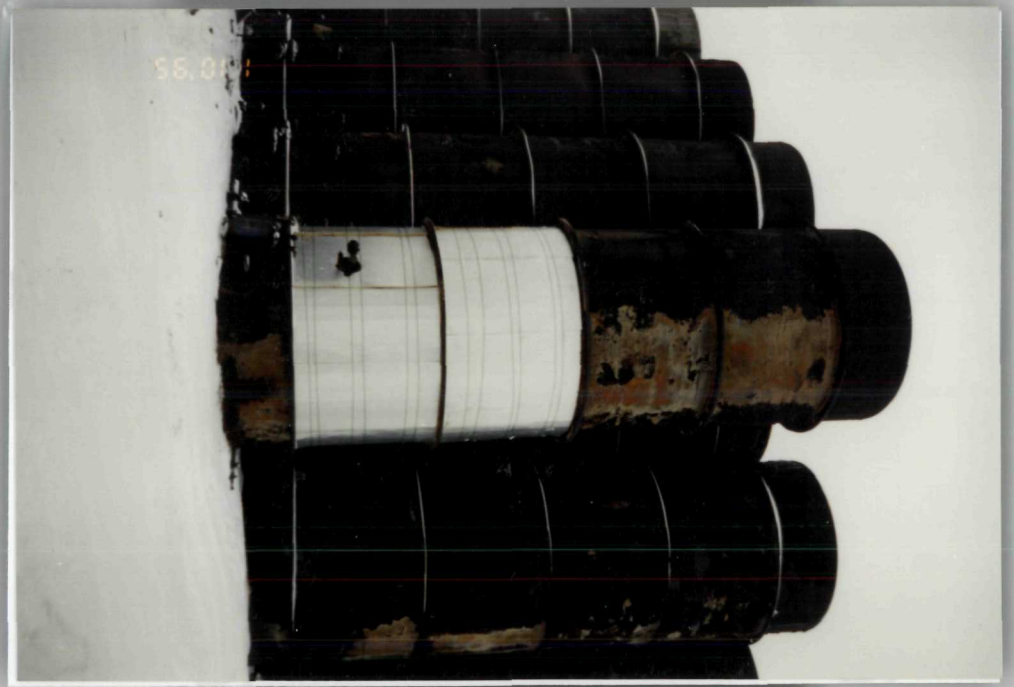
SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 18 DIR: SE PHOTOGRAPHER: Rydzewski
DESCR: View of "slop trough" next to shallow pit. Spilled oil is picked up and placed in slop trough.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 19 DIR: SE PHOTOGRAPHER: Rydzewski
DESCR: Half tank which was located next to pit on 10/30/94. Currently located next to discarded UST.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 20 DIR: SE PHOTOGRAPHER: Rydzewski
DESCR: View of inside of half tank. A pipe, located in the middle, was used as a source to heat oil.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 21 DIR: SE PHOTOGRAPHER: Rydzewski
DESCR: Vegetable oil tanks located in the shallow pit area.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 22 DIR: SSE PHOTOGRAPHER: Rydzewski
DESCR: Vegetable oil tanks which formerly were diesel oil tanks. Note tank condition and lack of berm.



SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 23 DIR: SSE PHOTOGRAPHER: Rydzewski
DESCR: Vegetable oil tank. Note condition of tank and lack of secondary containment.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 24 DIR: S PHOTOGRAPHER: Rydzewski
DESCR: Berm surrounding southwest corner of vegetable oil tanks. Note height of berm wall.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 25 DIR: S PHOTOGRAPHER: Rydzewski
DESCR: Vegetable oil tanks. Note condition and lack of adequate containment.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 26 DIR: SE PHOTOGRAPHER: Rydzewski
DESCR: Green poly tanks on western peninsula. Note that there is no secondary containment.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 27 DIR: WSW PHOTOGRAPHER: Rydzewski
DESCR: Stacked 55-gallon drums filled with vegetable oil. There is no containment around the drums.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 28 DIR: NW PHOTOGRAPHER: Rydzewski
DESCR: Stacked 55-gallon drums of vegetable oil with no containment. Note condition of drums.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 31 DIR: NNE PHOTOGRAPHER: Rydzewski
DESCR: Breach in berm near poly tanks and diesel and asphalt tanks.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 32 DIR: N PHOTOGRAPHER: Rydzewski
DESCR: Breach in berm between vegetable oil tanks and diesel and asphalt tanks.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 33 DIR: N PHOTOGRAPHER: Rydzewski
DESCR: Oil puddle between diesel and asphalt tanks.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 34 DIR: NW PHOTOGRAPHER: Rydzewski
DESCR: Oil-stained ground, pipes and tank. Note condition of rusted tanks.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 29,30 DIR: NW PHOTOGRAPHER: Rydzewski
DESCR: Panoramic from scrap pile looking northwest to northeast.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 35 DIR: SE PHOTOGRAPHER: Rydzewski
DESCR: Egan-Marine Corp.'s emergency response trailer which is used commercially.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 36 DIR: W PHOTOGRAPHER: Rydzewski
DESCR: Oil puddle between diesel and asphalt tanks and oil-soaked ground.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 37 DIR: NW PHOTOGRAPHER: Rydzewski
DESCR: Solidified vegetable oil on ground next to sludge troughs and glass-lined tanks.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 38 DIR: W PHOTOGRAPHER: Rydzewski
DESCR: Heating oil tank used to heat office.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 39 DIR: W PHOTOGRAPHER: Rydzewski
DESCR: Unmarked drums next to mobile trailer and office.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 40 DIR: N PHOTOGRAPHER: Rydzewski
DESCR: Wood burner used to heat maintenance building. Oil-soaked scrap wood is used for fuel.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 41 DIR: SW PHOTOGRAPHER: Rydzewski
DESCR: View of western peninsula and barge slip with tugs.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 42 DIR: NNE PHOTOGRAPHER: Rydzewski
DESCR: View of paint thinner drum and wagon with fire hoses which are burned in wood burner for fuel.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 43 DIR: NNW PHOTOGRAPHER: Rydzewski
DESCR: View of paint thinner drum and other drums outside of maintenance building.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 44 DIR: SW PHOTOGRAPHER: Rydzewski
DESCR: View of on-going barge-cleaning operations.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 45 DIR: E PHOTOGRAPHER: Rydzewski
DESCR: Drums stored under pole shed on eastern peninsula. Note lack of secondary containment.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 46 DIR: NE PHOTOGRAPHER: Rydzewski
DESCR: Close-up view of drums stored under pole shed. Note empty drums.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 47 DIR: N PHOTOGRAPHER: Rydzewski
DESCR: Stacked 55-gallon drums of vegetable oil behind scrap storage shed. Drums have no containment.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 48 DIR: NW PHOTOGRAPHER: Rydzewski
DESCR: Close-up view of drums next to scrap storage shed. Note condition of drums.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 49 DIR: N PHOTOGRAPHER: Rydzewski
DESCR: Close-up view of 55-gallon drums stacked next to scrap storage shed.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 50 DIR: S PHOTOGRAPHER: Rydzewski
DESCR: 55-gallon drums stacked next to scrap storage shed. Note condition of drums.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 51 DIR: NW PHOTOGRAPHER: Rydzewski
DESCR: Drums in poor condition and stacked three high next to scrap storage shed.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 52 DIR: NW PHOTOGRAPHER: Rydzewski
DESCR: Drums next to scrap storage building. Drums are stacked 3 high and number approximately 350.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 53 DIR: E PHOTOGRAPHER: Rydzewski
DESCR: Drums stacked under pole shed.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 54 DIR: S PHOTOGRAPHER: Rydzewski
DESCR: Former underground storage tank which is being stored on eastern peninsula.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 55 DIR: E PHOTOGRAPHER: Rydzewski
DESCR: Pulled underground storage tanks being stored on the eastern peninsula.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 56 DIR: NNE PHOTOGRAPHER: Rydzewski
DESCR: View of eastern peninsula from southwest corner of peninsula looking north.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 57 DIR: N PHOTOGRAPHER: Rydzewski
DESCR: Close-up view of pile of crushed empty drums.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 58 DIR: N PHOTOGRAPHER: Rydzewski
DESCR: View of crushed drum pile in foreground and pole shed and scrap storage building in background.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 59 DIR: WSW PHOTOGRAPHER: Rydzewski
DESCR: View of sheen on puddle under steam exhaust from barge-cleaning operations trailer.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 60 DIR: W PHOTOGRAPHER: Rydzewski
DESCR: Overview of area between the two peninsulas. Wood burner is in building to the right.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 61 DIR: NW PHOTOGRAPHER: Rydzewski
DESCR: Drums of oil outside maintenance building. Drums have no secondary containment.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 62 DIR: SE PHOTOGRAPHER: Rydzewski
DESCR: Close-up view of sample location S1 taken between the 27,000 gallon vegetable oil tanks.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 63 DIR: E PHOTOGRAPHER: Rydzewski
DESCR: Perspective view of sample location S1.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 64 DIR: N PHOTOGRAPHER: Rydzewski
DESCR: Perspective view of sample location S2. S2 was collected from the same point as S1.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 65 DIR: N PHOTOGRAPHER: Rydzewski
DESCR: Sample location point of S3.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 66 DIR: E PHOTOGRAPHER: Rydzewski
DESCR: Perspective of sample locations S3 and S4.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 67 DIR: W PHOTOGRAPHER: Rydzewski
DESCR: Perspective of sample locations S3 and S4.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 68 DIR: N PHOTOGRAPHER: Rydzewski
DESCR: Close-up view of sample location S3.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 69 DIR: W PHOTOGRAPHER: Rydzewski
DESCR: Perspective view of sample location S3.

SITE: Egan Marine TDD #: T05-9501-003 DATE: 1/10/95
PHOTO #: 70 DIR: E PHOTOGRAPHER: Rydzewski
DESCR: Perspective view of sample location S3.

SITE: Egan Marine PHOTO #: 70
TDD#: T05-9501-003 DATE: 01/10/95
DIR: E PHOTOGRAPHER: RYDZEWSKI
DESCR: Perspective view of sample location S3.

SITE: Egan Marine PHOTO #: 68
TDD#: T05-9501-003 DATE: 01/10/95
DIR: N PHOTOGRAPHER: RYDZEWSKI
DESCR: Close-up view of sample location S3.

SITE: Egan Marine PHOTO #: 69
TDD#: T05-9501-003 DATE: 01/10/95
DIR: W PHOTOGRAPHER: RYDZEWSKI
DESCR: Perspective view of sample location S3.

SITE: Egan Marine PHOTO #: 67
TDD#: T05-9501-003 DATE: 01/10/95
DIR: W PHOTOGRAPHER: RYDZEWSKI
DESCR: Perspective of sample locations S3 and S4.

Attachment B

Analytical Data Package

ecology and environment, inc.
International Specialists in the Environment

111 West Jackson Boulevard
Chicago, Illinois 60604
Tel: (312) 663-9415, Fax: (312) 663-0791

M E M O R A N D U M

DATE: March 13, 1995

TO: Karen Rydzewski, TAT Project Manager, E & E, Chicago, IL

FROM: Yvette Anderson, TAT Chemist, E & E, Chicago, IL YA

THROUGH: David Hendren, TAT Analytical Services Manager, E & E, Chicago, IL
Mary Jane Ripp, TAT QA Manager, E & E, Chicago, IL

SUBJECT: Total Petroleum Hydrocarbons Data Review, Egan Marine, Lemont, Cook County, IL

REFERENCE: Project TDD T05-9501-003 Analytical TDD T05-9501-803
Project PAN EIL0852CBA Analytical PAN EIL0852AAA

The data quality assurance (QA) review of three solid samples and one liquid sample collected from the Egan Marine site is complete. The samples were collected on January 10, 1995, by the Technical Assistance Team (TAT) contractor, Ecology & Environment, Inc. (E & E). The samples were submitted to NET-Midwest, Bartlett, Illinois, for analysis. The laboratory analyses were performed according to United States Environmental Protection Agency Solid Waste 846 Method 8015.

Sample Identification

E & E Identification No.	Laboratory Identification No.
S1	290734
S2	290735
S3	290736
S4	290737

Data Qualifications

I. Sample Holding Time: Acceptable

The samples were collected on January 10, 1995, extracted on January 16, 1995, and analyzed on January 18 and January 19, 1995. This is within the 14-day holding time for solid or concentrated liquid samples.

II. Calibrations: Acceptable

A three-point initial calibration was performed prior to analysis. The percent relative standard deviations (%RSD) between response factors were less than 10% for all detected target compounds.

III. Blanks: Acceptable

A method blank was analyzed with the samples. No target compounds or contaminants were detected in the method blank.

IV. Additional QC Checks: Acceptable

The recoveries of the surrogates used in the sample and blank were within the laboratory established guidelines.

V. Overall Assessment of Data for Use: Acceptable

The overall usefulness of the data is based on criteria for QA Level II outlined in the Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 (April 1990), Data Validation Procedures, Section 9.0, Generic Data Validation Procedures. Based upon the information provided, the data are acceptable for use.

NATIONAL ENVIRONMENTAL TESTING, INC.

Bartlett Division
850 W. Bartlett Rd.
Bartlett, IL 60103
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ANALYTICAL REPORT

Mr. Dave Hendren
ECOLOGY & ENVIRONMENT, INC
111 West Jackson Blvd.
Chicago, IL 60604

01/20/1995

Sample No. : 290734

NET Job No.: 95.00125

Sample Description: S1; Grab
T05-9501-803(E-M); ZT3051

Date Taken: 01/10/1995
Time Taken: 13:45
IEPA Cert. No. 100221

Date Received: 01/12/1995
Time Received: 07:00
WDNR Cert. No. 999447130

Parameter	Results		Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run		Analytical Method
Solids, Total	88.7		%	01/16/1995	0.1	sdf		1187	2540 (4)
Prep, TPH CALIF Non-Aqueous	extracted			01/16/1995		las	100		CA LUFT
TPH CALIFORNIA METHOD									
TPH as Gasoline	<20.0	D2	mg/kg	01/18/1995	10.0	seh	100	155	CA LUFT
TPH as Diesel Fuel	1,180	D20	mg/kg	01/18/1995	10.0	seh	100	155	CA LUFT
TPH as Oil	<20.0	D2	mg/kg	01/18/1995	10.0	seh	100	155	CA LUFT

D2 : Parameter analysis performed at a 2x dilution.
D20 : Parameter analysis performed at a 20x dilution.

NATIONAL ENVIRONMENTAL TESTING, INC.

Bartlett Division
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ANALYTICAL REPORT

Mr. Dave Hendren
ECOLOGY & ENVIRONMENT, INC
111 West Jackson Blvd.
Chicago, IL 60604

01/20/1995

Sample No. : 290735

NET Job No.: 95.00125

Sample Description: S2; Grab
T05-9501-803(E-M); ZT3051

Date Taken: 01/10/1995
Time Taken: 14:00
IEPA Cert. No. 100221

Date Received: 01/12/1995
Time Received: 07:00
WDNR Cert. No. 999447130

Parameter	Results		Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run		Analytical Method
Solids, Total	90.1		%	01/16/1995	0.1	sdf		1187	2540 (4)
Prep, TPH CALIF Non-Aqueous	extracted			01/16/1995		las	100		CA LUFT
TPH CALIFORNIA METHOD									
TPH as Gasoline	<20.0	D2	mg/kg	01/18/1995	10.0	seh	100	155	CA LUFT
TPH as Diesel Fuel	2,130	D20	mg/kg	01/18/1995	10.0	seh	100	155	CA LUFT
TPH as Oil	<20.0	D2	mg/kg	01/18/1995	10.0	seh	100	155	CA LUFT

D2 : Parameter analysis performed at a 2x dilution.
D20 : Parameter analysis performed at a 20x dilution.

NATIONAL ENVIRONMENTAL TESTING, INC.

Bartlett Division
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ANALYTICAL REPORT

Mr. Dave Hendren
ECOLOGY & ENVIRONMENT, INC
111 West Jackson Blvd.
Chicago, IL 60604

01/20/1995

Sample No. : 290736

NET Job No.: 95.00125

Sample Description: S3; Grab
T05-9501-803(E-M); ZT3051

Date Taken: 01/10/1995
Time Taken: 14:20
IEPA Cert. No. 100221

Date Received: 01/12/1995
Time Received: 07:00
WDNR Cert. No. 999447130

Parameter	Results		Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run		Analytical Method
Solids, Total	60.0		%	01/16/1995	0.1	sdf		1187	2540 (4)
Prep, TPH CALIF Non-Aqueous	extracted			01/16/1995		las	100		CA LUFT
TPH CALIFORNIA METHOD									
TPH as Gasoline	<1,000	D100	mg/kg	01/18/1995	10.0	seh	100	155	CA LUFT
TPH as Diesel Fuel	157,000	D1000	mg/kg	01/19/1995	10.0	seh	100	156	CA LUFT
TPH as Oil	<1,000	D100	mg/kg	01/18/1995	10.0	seh	100	155	CA LUFT

D100 : Parameter analysis performed at a 100x dilution.
D1000 : Parameter analysis performed at a 1000x dilution.

NATIONAL ENVIRONMENTAL TESTING, INC.

Bartlett Division
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Bartlett, IL 60103
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ANALYTICAL REPORT

Mr. Dave Hendren
ECOLOGY & ENVIRONMENT, INC
111 West Jackson Blvd.
Chicago, IL 60604

01/20/1995

Sample No. : 290737

NET Job No.: 95.00125

Sample Description: S4; Grab
T05-9501-803(E-M); ZT3051

Date Taken: 01/10/1995
Time Taken: 14:30
IEPA Cert. No. 100221

Date Received: 01/12/1995
Time Received: 07:00
WDNR Cert. No. 999447130

Parameter	Results		Units	Date of Analysis	Method PQL	Analyst	Batch No. Prep/Run		Analytical Method
Solids, Total	81.3		%	01/16/1995	0.1	sdf		1187	2540 (4)
Prep, TPH CALIF Non-Aqueous	extracted			01/16/1995		las	100		CA LUFT
TPH CALIFORNIA METHOD									
TPH as Gasoline	<20.0	D2	mg/kg	01/18/1995	10.0	seh	100	155	CA LUFT
TPH as Diesel Fuel	4,390	D500	mg/kg	01/19/1995	10.0	seh	100	156	CA LUFT
TPH as Oil	<20.0	D2	mg/kg	01/18/1995	10.0	seh	100	155	CA LUFT

D2 : Parameter analysis performed at a 2x dilution.
D500 : Parameter analysis performed at a 500x dilution.

Attachment C

Secondary Containment Cost Estimates

ecology and environment, inc.
International Specialists in the Environment

858 East Crescentville Road
Cincinnati, OH 45246
Tel: 513/671-4717, Fax: 513/671-4917

M E M O R A N D U M

TO: Karen Rydzewski
Region V Technical Assistance Team

FROM: Steven Shadix
Region V Technical Assistance Team

DATE: March 30, 1995

SUBJECT: Secondary containment cost estimates for Egan Marine site.

Recently, you requested me to design both a concrete and clay secondary containment area for the oil storage tanks at the Egan Marine site. Additionally, you requested a cost estimate for each of the designs.

While a full design for the secondary containment was not possible with only the square footage of the area to be contained, I did determine the types and amounts of materials that would be needed to complete each design, based on several assumptions. With that information, I was able to determine an approximate cost for each scenario.

Costs for material, labor, and equipment were based on the 1995 National Construction Estimator, 43rd Edition, by Martin D. Kiley. The estimated total costs for each of the design scenarios is as follows:

Clay Design	$ 49,977.34
Concrete Design	$196,118.51

Attachments:

Clay Design
Concrete Design

ATTACHMENT C-1

CLAY DESIGN

CLAY DESIGN

The clay design consisted of a 2-foot high compacted clay berm surrounding the containment area and a 4-inch compacted clay base. Additionally, a 2-inch rock base would cover the compacted clay base to provide stability. To prevent erosion of the compacted clay berms, they would be seeded with bluegrass.

The following assumptions are used in the clay design:

1) The existing storage tanks are already seated on an impermeable base.

2) The area of the existing tanks was not deducted from calculations.

3) Excess labor costs necessary for working around existing tanks was not determined.

4) Containment berm was not necessary along the existing building walls.

5) Existing containment berms were sufficient and could be incorporated into the new containment wall.

6) No openings will exist in the containment wall with the exception of those in the existing building.

7) No slope or sump will be provided for the drainage of rainwater, etc., from the containment area.

8) Design does not account for vehicle traffic, etc., in the containment area.

9) 8% sales tax on all materials.

10) Contractor mark-up of 17.3% for overhead and contingency, along with 7.5% profit margin.

Qty	Craft @ Hours	Unit	Material	Labor	Equipment	Total
			Clay Estimate			
Rough grading, (1 acre per hour)						
0.83	S1@1.660	Acre	0.00	77.45	173.18	250.63
Clay fill						
975.00	--@.0000	CY	26,081.25	0.00	0.00	26,081.25
Spread and shape earth from loose piles, (164 CY per hour)						
975.00	TO@5.850	CY	0.00	302.54	730.28	1,032.82
Compacting, based on using a sheepsfoot roller towed behind a dozer and a 4,000 gallon truck, equipment cost is $140 per hour. Productivity assumes 3 passes at 5' wide (185 CY per hour)						
975.00	C3@15.60	CY	0.00	719.84	782.44	1,502.28
Water, based on water at $2.00 per 1,000 gallons and 66 gallons per cubic yard of compacted material. Assumes optimum moisture at 10%, natural moisture of 2% and evaporation of 2%.						
975.00	--@.0000	CY	135.62	0.00	0.00	135.62
Finish shaping for berms (150 SY per hour)						
835.00	TO@5.845	SY	0.00	303.77	723.69	1,027.47
Rock fill for bottom, drain rock, 3/4" to 1-1/2" (12 CY per hour)						
225.00	S6@56.25	CY	4,092.75	2,503.80	902.81	7,499.36
Seeding (grass) berms, broadcast spreader, 5 pounds/1,000 SF, 10,000 SF/hour, seed $3.50/pound						
7.50	CL@.7500	MSF	140.44	30.66	1.53	172.62
Total Manhours, Material, Labor, and Equipment:						
	86.0		30,450.06	3,938.06	3,313.93	37,702.05
				Subtotal:		37,702.05
				17.30% Overhead:		6,522.45
				7.50% Profit:		3,316.84
				Estimate Total:		47,541.34
				Tax on Materials:		2,436.00
				Grand Total:		49,977.34

ATTACHMENT C-2

CONCRETE DESIGN

CONCRETE DESIGN

The concrete design consisted of a 2-foot high, 1-foot thick concrete wall surrounding the containment area and a 6-inch concrete slab for the base. The concrete slab would be place upon a 2-inch sand base covered with a 4 mil vapor barrier. The concrete slab would be reinforced with welded wire mesh, while the wall does not need reinforcement due to its thickness. The concrete would be sealed to inhibit weathering.

The following are the assumptions used in the concrete design:

1) The existing storage tanks are already seated on an impermeable base.

2) The area of the existing tanks was not deducted from calculations.

3) Excess labor costs necessary for working around existing tanks was not determined.

4) Containment berm was not necessary along the existing building walls.

5) No soil disposal needed following excavation.

6) No openings will exist in the containment wall with the exception of those in the existing building.

7) No slope or sump will be provided for the drainage of rainwater, etc., from the containment area.

8) Design does not account for vehicle traffic, etc., on the concrete slab or for the possibility of impacts to the concrete wall.

9) Each wall form could be used three times, while each slab form could be used five times.

10) Length of forms needed for the slab based on perimeter of containment area.

11) 3000 PSI ready-mixed concrete would be used and could be placed directly from the truck chute.

12) 8% sales tax on all materials.

13) Contractor mark-up of 17.3% for overhead and contingency, along with 7.5% profit margin.

Qty	Craft @ Hours	Unit	Material	Labor	Equipment	Total
			Concrete Estimate			
Grading:						
Using a dozer (1000 SF and $43.50 per hour)						
36050.00	S1@36.05	SF	0.00	1,542.94	771.47	2,314.41
Walls:						
Trenching, 18" x 24" depth, .111 CY per LF (135 LF/Hr)						
710.00	S1@10.65	LF	0.00	493.81	113.96	607.76
Formwork, heights to 4', 1.1 SF of plyform, 1.5 BF of lumber and $.35 for nails, ties and oil per SFCA						
5680.00	F5@454.4	SFCA	9,663.38	21,697.03	0.00	31,360.42
Concrete and placing, direct from chute						
110.00	CL@52.69	CY	7,827.05	2,153.91	135.36	10,116.32
Slab:						
Sand fill base, 2" sand cushion, hand spread, 1 throw						
36050.00	CL@108.1	SF	4,628.82	4,243.09	0.00	8,871.91
Vapor barrier, polyethylene, over sand bed, including 20% lap and waste, 4 mil						
36050.00	CL@36.05	SF	771.47	1,542.94	0.00	2,314.41
Formwork, edge forms						
900.00	F5@49.50	LF	510.39	2,368.98	0.00	2,879.37
Reinforcement, wire mesh, 6" x 6" W1.4 x W1.4 (#10 x #10), slabs						
36050.00	RB@144.2	SF	3,857.35	8,100.44	0.00	11,957.79
Concrete, 6" thick, direct from chute						
670.00	CL@288.1	CY	47,673.85	11,757.16	716.90	60,147.91
Float finish						
36050.00	CM@252.3	SF	0.00	11,957.79	0.00	11,957.79
Liquid curing and sealing compound, sprayed-on, Mastercure, 400 SF and $25 per gallon						
36050.00	CL@144.2	SF	2,314.41	5,786.03	0.00	8,100.44

Qty	Craft @ Hours	Unit	Material	Labor	Equipment	Total
Total Manhours, Material, Labor, and Equipment:						
	1576.3		77,246.72	71,644.10	1,737.68	150,628.50
				Subtotal:		150,628.50
				17.30% Overhead:		26,058.73
				7.50% Profit:		13,251.54
				Estimate Total:		189,938.77
				Tax on Materials:		6,179.74
				Grand Total:		196,118.51